




3/11/09

Step ~~S1104~~ S2204, if there is an appropriate chromosome, the control section 105 completes the processing. Meanwhile, if there is no appropriate chromosome at Step 2204, the control section 105 proceeds to operation at Step S2205.

 Please amend paragraph [0278] on page ²⁹²~~102~~¹⁰⁸, as follows:

[0292] In the fourth embodiment, the operation of the control section 105 is similar to that in the first embodiment, except for the control method of the matching circuit 400. In the first embodiment, the control section 105 has calculated for the serial varactor voltage and parallel varactor voltage corresponding to the chromosome, and determined to apply these varactor voltages to the matching circuit 102. In the fourth embodiment, the control section 105 controls the impedance of the whole matching circuit 400 by turning on and off the switch in the matching circuit 400 depending on each gene in the chromosome. For example, if the gene of the n-th (n= 1, 2, ..., 8) bit is "1", the control section 105 turns on an n-th switch, while, if the gene of the n-th bit is "0", it turns off ~~on~~ the n-th switch.

Please amend paragraph [0401] on page 142, as follows:

[0401] Since it is shown that the smaller the reflected voltage is, the further the impedance is matched, the selection probability p(i) used for a difference in natural selection of the chromosome will be given by Equation (7).

$$p(i) = \frac{\frac{1}{RSSI(j)}}{\sum_{i=0}^{N_c} \frac{1}{RSSI(i)}} \quad (\text{Equation 7})$$

A chromosome with small reflected voltage will be preferentially selected by using the selection probability p(i) shown by Equation (7).

Please amend paragraph [0426] on page 151, as follows:

[0426] One half of the difference L2 is added to the smaller one of the varactor voltages 207 of the load value A and the load value B like Equation ~~(10)~~ (12), and the resulting value is set as the varactor voltage 207 of the load value Ax.